Welfare Policy and Early Childhood Development: New Lessons from Population-Level Data

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Abstract
Since the US government enacted the *Personal Responsibility and Work Opportunity Reconciliation Act*, numerous studies query how welfare influences child development. No consensus yet exists in the literature. In response, the authors use population-level data for British Columbia kindergarten children (n= 40,772) to examine correlations between neighborhood rates of welfare and neighborhood rates of child vulnerability. After controlling for local SES, hierarchical regression analyses reveal a significant association between welfare rates at year of birth and subsequent rates of vulnerability in kindergarten. By contrast, no significant association is found between neighborhood child vulnerability levels and the reduction in neighborhood welfare caseloads between birth and school entry. The authors advance the neighborhood effects literature by interpreting these associations in light of recently published qualitative data provided by lone mothers receiving welfare. The latter affirm *both* compositional and policy interpretations of regression findings.

Keywords
workfare, social assistance, neighbourhood effects

Welfare Policy and Early Childhood Development: New Lessons from Population-Level Data

Introduction

Since the US federal government enacted the *Personal Responsibility and Work Opportunity Reconciliation Act* in 1996, North American researchers have given substantial attention to the question of how welfare policy influences child development. There remains, however, no consensus in the literature. Some studies maintain that children of working-poor households experience modestly better outcomes than children residing with guardians who receive welfare (Kornberger, Fast, & Williamson, 2001; Lohman, Pittman, Coley, & Chase-Lansdale, 2004). Other studies disagree, reporting that household receipt of welfare is not related to child development once researchers control for parental characteristics (e.g. Levine & Zimmerman, 2005).

Similar debate occurs with respect to welfare-to-work measures. Several studies conclude that these measures do not correlate with child development (Chase-Lansdale et al., 2003; Dunifon, Hynes, & Peters, 2006). They report instead that parent qualities influence child outcomes, rather than the shift to paid work *per se* (Osborne & Knab, 2007); or that overall family income-level is as, if not more, important than parent activity or source of income (Williamson, Salkie, & Letourneau, 2005). In contrast, other studies conclude that some children of parents governed by welfare-to-work measures are adversely influenced by the policies, especially the imposition of time limits. Deleterious outcomes are identified for children of parents who are less likely to be long-term welfare dependents (Morris, Bloom, Kemple, & Hendra, 2003); and children of parents engaged in family-unfriendly employment, particularly long commutes to and from job sites (Dunifon, Kalil, & Bajracharya, 2005). In opposition to the latter studies, still other researchers provide evidence that welfare-to-work measures have positive consequences for children of welfare recipient families (Gennetian & Miller, 2002; Hofferth, Smith, McLoyd, & Finkelstein, 2000; Huston et al., 2005). In this camp, some observe that earnings disregards associate with favorable child outcomes more so than mandatory employment services or time limits (Morris, Huston, Duncan, Crosby, & Bos, 2001).

Given the uncertainty in the literature, our study advances the debate by drawing on unique population-level child development data for an entire cohort of kindergarten-age children residing in British Columbia (BC), Canada (n= 40,772). We treat these data as dependent variables, which we examine in the light of Census and other administrative data, including data about welfare recipients. We aggregate all data by neighborhood and/or town boundaries *as defined by locals* in each of the province's 59 geographically contiguous school districts.

While this Canadian study will interest comparative scholars of the Anglo-liberal welfare regime generally, the BC data will speak directly to Canadian and US readers because current workfare policy in the province was inspired by comparable policy in American states, particularly Wisconsin, where provincial government officials visited before launching dramatic policy change domestically (Klein & Long, 2003). In 2002, the BC government reduced welfare benefit levels and restricted eligibility for social assistance. Some of the American-inspired BC policy changes are unique in Canada, including the two-year time-limit rule, which restricts welfare recipients without children who are deemed employable to just two years of support during any five-year period. For employable recipients with dependent children who remain on assistance beyond two years, the rule does not eliminate benefits altogether, but sanctions recipients through a reduction in the monthly support allowance of $200 per couple, or $100 for a single parent. The time-limit is accompanied by a tighter definition of "employability" such that parents are now expected to work for pay when their youngest child reaches age three, down from age seven. Although tighter eligibility rules in the US were often coupled with earnings disregards and child care subsidies, the BC government elected to cut these employment inducements.

Against this policy backdrop, we use British Columbia data to explore two neighbourhood associations. The first is the relationship between neighborhood rates of welfare in 1998, the birth year for

the majority of the children in our kindergarten cohort, and rates of vulnerability among kindergarten children observed in the same regions between the 2001/02 and 2003/04 school years. Given low benefit levels in BC by international standards (Bradshaw, 2007), we hypothesize that we will *not* find evidence that welfare policy is ameliorating neighborhood vulnerability patterns that otherwise associate with low-income. Instead, we expect that welfare recipient rates in neighborhoods will correlate positively with neighborhood vulnerability rates, as reported by North American research when study designs do not control for the characteristics of individual welfare recipients.

The second correlation we examine is that between child vulnerability levels in each neighborhood and the welfare caseload change, generally a reduction, in each neighborhood during the preschool years of the sample. The 11 percent of BC families, including individuals living alone, who received social assistance in 1998 fell to six percent by 2004. The declining rates are attributable to the tightened eligibility rules described above, and the fact that unemployment has dropped to a 30-year low as a result of booms in construction, oil and gas industries. Given the latter, we hypothesize that neighborhoods that report larger reductions in welfare recipient rates will enjoy lower rates of child vulnerability. In the context of a stronger economy, this hypothesis assumes that neighbourhoods benefit from the collective socialization to which residents can contribute even when transitions from welfare are enforced by policy rather than attracted by employment opportunities.

The individual-level child development data in BC on which we draw can technically be linked to children's family-level data about household income, occupation and receipt of welfare, which can in turn be linked to their neighborhood SES data. However, ethical concerns about preserving privacy delay utilizing the family-level linkages. In the absence of these links, we elect to examine the two neighbourhood correlations above. Notwithstanding the statistical pitfalls of neglecting the nested nature of data describing individual children living within households that are in turn rooted within neighborhoods, area-based correlations remain very useful for policymaking. The policy levers available to governments cannot typically engage directly with individual circumstances. Instead they must grapple with generalizations about the families that live in communities when designing policy. Neighborhood vulnerability rates, together with neighborhood descriptions made available by aggregating Census and administrative data, thus present population health information at a level of abstraction that remains important for policy analysis.

The article develops in four sections. The first describes the innovative data sources on which we rely. The second describes the hierarchical regression modeling strategy we use to identify ecological associations between welfare policy and child development. The third reports the results of these regressions. The fourth interprets the correlations we find between welfare policy and child vulnerability rates in the light of articles that publish qualitative data about BC lone mothers receiving welfare.

Sample

Child development observations for a near-complete census of kindergarten children represent a methodological asset when studying community effects, including the influence of public policy. Our focus on kindergarten children builds on research by Fauth et al. (2005) who report that data from the experimental New York Yonkers Project reveal that children under age seven may be particularly susceptible to local environments. It also responds to compelling epidemiological evidence that experiences from gestation through age six strongly influence life-long development, in part because this life course stage is uniquely plastic to the social context. Research suggests that early social influences can biologically imbed their impact through gene expressions that will optimize or undermine health trajectories thereafter (Keating & Hertzman, 1999).

The BC sample represents teacher evaluations for young children from all neighborhoods throughout an entire political jurisdiction that is home to 4.4 million people in an area about four times the size of Great Britain. Such data capture all walks of life: rural and urban, rich and poor, minority and

majority. By contrast, most neighborhood effects studies rely on relatively small cohorts of children, typically from high-risk populations like children with low-birth weight, or children from the inner-city (for example Brooks-Gunn, Duncan, & Aber, 1997a; Leventhal & Brooks-Gunn, 2004; Turley, 2003). Such studies risk under-exploring early developmental trajectories among the majority of the population.

The opportunity to collect population-level child development observations rests with the implementation of the Early Development Instrument (EDI) in BC. The EDI is a teacher-administered checklist that measures school readiness at kindergarten. The core section consists of 103 items measuring five scales of development: physical health, social competence, emotional maturity, language and cognitive development, as well as general knowledge and communication skills in the majority language and culture. Neighbourhood vulnerability rates are calculated for each scale separately based on a summary of the percentage of local children whose total scores fall below a predetermined cutoff. Janus and Offord (2007) provide reliability and validity evidence for the tool.

Measuring five scales of development enhances the population-level sampling strategy. Many community effects studies tend to examine only one, or sometimes two, domains of development (eg. Boyle & Lipman, 2002; Kohen, Brooks-Gunn, Leventhal, & Hertzman, 2002). Early experiences are thus spliced, rather than approached holistically. In contrast, EDI data enable researchers to assess policy influences in studies that are attuned to the broad scope of domains simultaneously. Previous work by Hamilton (2000) affirms this approach when examining welfare policy.

We aim to identify the influence of welfare policy over neighbourhood child development, after controlling for local socioeconomic status. Rather than define neighborhood by the convenience of Census definitions, the BC work on which we draw engages constituents in each of the province's 59 contiguous school districts to define neighborhoods (N = 478) that are generally home to between 35 and 200 kindergarten children. Local citizens who are associated with childhood programs were invited to mark on blank maps of their regions the internal boundaries that reflect lived experiences of social and economic divisions, natural or other physical boundaries, municipal divisions, and/or school catchment areas. The EDI observations provided by kindergarten teachers are organized accordingly, as are socioeconomic measures. This strategy for identifying neighborhoods is superior to relying on Census demarcations because the latter regularly diverge from boundaries that are meaningful to residents in the light of present-day experiences (Burton & Jarrett, 2000, p. 1117).

In a recent literature review by Rajaratnam et al. (2006), it is clear that researchers increasingly hone their attention on a narrow range of area-level measures as they innovate with multi-level modeling strategies. In contrast, our neighbourhood analyses maintain a broader understanding of socioeconomic issues in order to retain analytic power from the wealth of markers available in the Census, which we in turn organize according to the locally defined neighbourhood boundaries. Kershaw et al. (2007) describe the variables available in the 2001 Canadian Census to measure how structural features about the built environment intersect with compositional characteristics, including population heterogeneity vis-à-vis language, ethnicity, faith, age, etc., as well as income levels, (un)employment, occupations, and residential (in)stability.

Our study supplements Census data with 1998 Taxfiler information that is collected annually as citizens file their taxes. These data provide more refined measures of neighbourhood income distributions, including rates of deep poverty, income inequality, and wealth measured as capital gains, interest income, and charitable donations. These Taxfiler measures can in turn be calculated for two-earner couples, one-earner couples, single adults, families with children and families without children.

We also use Taxfiler data to create a social assistance component score that includes the 1998 rate of welfare among all residents in a neighborhood, including adults living alone; the rate for families with children under age 18 and under age 6; and the rate for both couples and lone mothers with children of the same age groupings. As a representative, the mean neighborhood welfare rate for families with children

under age 18 years is 15 percent; the low neighborhood rate is under 1 percent; the high rate equals 50 percent.

We use the same social assistance data to construct neighborhood measures of the degree of change in local social assistance by subtracting the 1998 rates from the rates reported in 2004, the year by which our entire sample enters kindergarten. A principal components analysis revealed that the corresponding change values for each variable in the 1998 social assistance component do not empirically represent a single component in the same way that the static variables do. In response, we focus on the change in social assistance rates between 2004 and 1998 reported for families with children under 18. The mean change is a drop of 7 percent; the neighborhood with the greatest reduction reports a decline of 25 percent; and the largest increase was 2 percent.

Since change in welfare rates may reflect not only the evolution of policy decisions, but also coinciding social and economic changes, we created SES *change* scores as additional potential predictors of child vulnerability rates. To capture this dynamic, we planned to use 1998 and 2004 Taxfiler data in conjunction with 2001 Census measures to give us three points in time with which to calculate robust SES change scores. However, because the 2001 Census markers are not developed with the same data or methodologies as the Taxfiler measures, concerns about data commensurability motivated us to settle for change-in-time variables calculated based only on the two years of Taxfiler information.

Methodology

Whereas the Kershaw et al. team (2007) examines neighbourhood correlations utilizing single variables from among the 1,200 Census neighborhood variables available in BC, our strategy is to reduce the Census and Taxfiler indicators to a much smaller number of thematic component scores, which would then serve as potential predictors in our regression models. We identify SES themes based on Brooks-Gunn et al.'s treatment of Coleman's (1988) research about social capital, work by Shaw and McKay (1942) and now also Sampson (e.g., Sampson, Morenoff, & Gannon-Rowley, 2002) concerning social disorganization, as well as Wilson's (1987) contributions to scholarship about the middle-class exodus from urban inner-cities. This process resulted in the identification of 24 themes. We then populated these themes with SES variables, with the number of variables per theme ranging from three to 73.

We examined the populated themes with exploratory principal components analyses, using promax rotation to maximize interpretability while allowing the extracted components to be intercorrelated. These analyses identified between one and four components per theme to which we assigned thematic variables according to a variable ordering procedure developed by Wu (2008). For each of these components, standardized scores were calculated and retained for modeling purposes. In addition to these component scores, some individual variables were retained when they did not empirically fit into a component. These regularly included the Taxfiler change scores discussed above, as well as a range of occupational measures, and an indicator of the share of the local population that is Aboriginal.

For each of the five scale-specific vulnerability rates measured by the EDI, our neighbourhood modeling employed two hierarchical regression analyses in order to test our two hypotheses. In the first stage of both analyses, only SES measures were included as potential explanatory variables. We restricted the list of potential predictors to those component scores or single variables that correlated at +/- .2 or higher with one or more of the five EDI vulnerability measures. We reduced the remaining list of potential predictors by removing those that were very highly correlated with one another. When SES predictors intercorrelated above +/- .8, we retained the variable with the strongest correlation with the EDI outcome, and dropped the others. We then deployed a stepwise procedure to select statistically significant SES predictors for each of the five EDI scales.

It is the second modeling stage that tests the influence exerted by neighbourhood rates of social assistance over local child development patterns. In our first set of two-stage models, the second stage examines whether the 1998 social assistance component score significantly enhances the explanatory

power of the first models. In our second set of two-stage models, the models in step two replace the 1998 component score with the 2004 – 1998 social assistance change measure in order to evaluate the extent to which welfare caseload reductions associate with neighbourhood child vulnerability rates. Analyzing the policy variables only in the second stage of the hierarchical regression analyses helps to rule out policy mechanisms emerging as a proxy for other social or economic issues, rather than as political tools.

For all statistically significant predictors of neighbourhood vulnerability rates, we report both the usual regression coefficients as well as Pratt scores (Thomas & Zumbo, 1996). A Pratt score indicates the relative importance of the effect of each significant predictor, with the total for all predictors in the model adding to one hundred. These scores permit direct comparisons of the power of each predictor in the model to explain variation in neighborhood vulnerability. Since variables that receive Pratt scores below five are interpreted as trivial for explanatory purposes, we do not refer to these variables in our discussion of results. Instead, we focus on Pratt scores in order to identify how SES measures vary in importance depending on the presence of social assistance markers. This strategy facilitates interpreting the associations between neighbourhood welfare and child vulnerability rates.

Regression Results

The models predicting neighbourhood vulnerability account for between 23 percent and 53 percent of the variation, depending on the EDI scale. The low R-square value of .234 occurs for the social scale; the high R-square value of .525 arises for the communication and general knowledge scale. We expect a particularly strong association between SES and vulnerability on the latter scale because it measures competence in the majority language and familiarity with the majority culture, abilities which align closely with the language and immigration component (see Table 4).

The component measuring social assistance rates in 1998, the birth year for the majority of our sample, is a significant predictor in models predicting physical, emotional, language/cognitive and communication/general knowledge vulnerability, or four of the five EDI scales. In terms of the remaining scale, the social assistance component fails to meet the standard of statistical significance when predicting social vulnerability only by a slim margin ($p = .059$). In all cases, the direction of the correlation remains positive, even after controlling for local socioeconomic status. Neighbourhoods with higher rates of social assistance around the birth year of the cohort report higher rates of vulnerability among local children as they enter kindergarten. See Tables 1 to 4 below. (For the sake of brevity, we publish Tables only when social assistance measures correlate significantly with vulnerability rates). These findings support our first hypothesis.

By contrast, the change in social assistance rates between 1998 and 2004 is conspicuous in its absence in models predicting vulnerability for *all five EDI scales*. In contrast to our second hypothesis, this finding suggests that policy reductions to neighbourhood welfare caseloads do *not* associate significantly with child vulnerability rates after accounting for local SES measures and income trajectories. Thus, places that enjoyed larger percentage reductions in their welfare caseloads during the cohort's preschool years did not generally witness a correspondingly lower level of child vulnerability when the children entered school.

It is noteworthy that the 1998 social assistance component contributes more to predicting vulnerability than any SES measure, including poverty, in three of the four models in which it is significant; and it is the second most important contributor in the fourth model. This relative importance is signaled by higher Pratt scores, which show that welfare rates account for between 19 and 48 percent of the explanatory power of the four models of neighbourhood vulnerability. The low importance score of 19 occurs for the general knowledge and communication scale, where the social assistance component is second only to the language and immigration component. The latter receives a Pratt score of 33 in this model (Table 4) because, as discussed above, it is particularly sensitive to neighbourhoods where English is less commonly spoken at home.

For each EDI scale, the difference in Pratt scores between the first and second models reveals the relative explanatory power of the SES measures in the absence and presence of the 1998 social assistance rates. These differences aid in interpreting the association between welfare policy and neighbourhood vulnerability levels. For instance, it is in terms of physical vulnerability that the 1998 social assistance measure is an especially strong predictor, contributing nearly 48 percent of the explanatory power when included in the regression (Table 1). As the social assistance component assumes this explanatory role, the Pratt scores for four SES predictors decline considerably in model two: the importance of unemployment drops 11 Pratt points; the importance of the proportion of lone parents drops 8 points; the importance of the divorce/separation rate for all families except lone mothers is nearly eliminated, dropping almost 20 Pratt points; and the importance of the divorce/separation rate for single mothers declines by six points. By contrast, the measure of poverty among heterosexual couples in which men do not report income and women are the only earners consistently receives a Pratt score of between 9 and 10 in both modeling stages.

These results show that the social assistance component is not a proxy for poverty, at least not among couples in which women are the sole earners. Rather, as one would expect, the social assistance component overlaps with a segment of the unemployed population in each neighbourhood. In addition, although just 38 percent of welfare recipients in 1998 had children, the influence yielded by social assistance coincides somewhat with the activity of local adults who are separated or divorced, and/or who parent alone. Indeed, neighbourhood rates of welfare for lone mothers with young children in BC are particularly severe: the mean is 52 percent; the low is 13 percent; and the high is 81 percent. While higher separation/divorce rates generally co-occur with less favourable collective socialization patterns, it is telling that there is a negative association between the divorce rate among lone mothers and physical vulnerability levels. This correlation may signal the importance for neighborhoods when adults enjoy legally codified access to a second income or a second person's time whenever they parent alone, particularly in terms of thinking about parental availability to contribute to the collective socialization capacity of their communities.

Similar patterns appear for the other EDI scales. The models predicting emotional vulnerability (Table 2) reveal that social assistance is the most important association, receiving a Pratt score of 26. As it enters into the regression, the influence of poverty among couples in which women are the only earners remains constant, with Pratt scores around 20. A second, less important poverty measure for lone parents also remains within two Pratt points across models, as does the association between emotional vulnerability and the proportion of children in the neighbourhood population, again with modest Pratt scores near five. In contrast, the presence of the social assistance component coincides with a decline in the influence of unemployment by six points. When a neighbourhood is home to a greater share of social assistance recipients, collective socialization patterns also benefit less from the favourable influences that co-exist when there are more wealthy families with children. The Pratt score for the wealth component thus declines by 10 points in model 2 (Table 2). Similarly, higher rates of social assistance co-occur somewhat with a reduction in the favorable socialization patterns that evolve when more local males find employment and social status in white collar positions, and, hence, the Pratt score for males in management drops by four points. Higher social assistance rates co-occur further with less residential stability, signaled by a five point reduction in the Pratt score for the latter measure.

In terms of language and cognitive vulnerability (Table 3), the social assistance component is again the most important predictor, with a Pratt score of 27. The influence of poverty remains relatively constant across the two modeling stages, as does the influence of local women employed in trades. The latter receives Pratt scores of nine in both models. As observed in regards to other scales, the Pratt scores for wealth drop by 11 points, and the scores for the percentage of lone parents fall by 12 points. We refine our understanding of the social assistance component in these models, however, because they draw attention to the negative relationship between income inequality among lone mothers and neighbourhood

vulnerability rates. As inequality among such mothers increases, it signals that more mothers who parent alone either escape low-income or fall into deep poverty. The harmful ecological influence of social assistance converges somewhat with the circumstances of the latter, as signaled by a drop in the Pratt score for the inequality component from 7.2 to 4.7.

Finally, the models predicting vulnerability vis-à-vis knowledge of the majority culture and communication in the majority language includes by far the most SES predictors (Table 4). Again, a measure of women in marginalized occupational positions, this time in manufacturing, emerges as a predictor, one which retains a similar Pratt score regardless of whether welfare rates are considered in the regressions. This occupational category disproportionately includes women of colour, who struggle with education levels below grade nine. As for other EDI scales, the importance of unemployment drops, as does the importance of the divorce or separation rate for lone mothers, although their overall importance is more modest in these models. Interestingly, the poverty measure we observe to be stable across models for all other EDI scales drops by four Pratt points between models one and two for the general knowledge/communication scale. It is also accompanied by a second measure of deep poverty among couples in which neither adult earns employment income, which declines in importance when the social assistant component is examined in the regression. Three other SES variables further assist our analysis of welfare policy. The deleterious impact on collective socialization that co-occurs with greater rates of social assistance overlaps somewhat with a concentration of apartments as opposed to single detached homes, lower education levels, and a higher income for the resident representing the 10th percentile in each neighbourhood. In the face of higher rates of poverty, especially deep poverty, a rising 10th percentile signals neighbourhoods where the worst-off are left behind even by residents who are socioeconomically disadvantaged by local standards.

Discussion

The finding that welfare caseload reductions do not associate significantly with rates of neighbourhood vulnerability at kindergarten provides evidence that welfare as a source as of income for the poor is not qualitatively worse for neighbourhood child outcomes than employment. A recent qualitative study of the BC welfare system helps to interpret this finding. It reveals that welfare policy obliges participation in specific, government-mandated, "Job Training" programs, along with employment in any available job, even when it comes at the expense of alternative educational strategies. These regulations therefore obstruct access to the upgrading that some welfare recipients perceive is necessary to find meaningful jobs that pay adequate wages, including completing high school requirements and/or pursuing technical training (Pulkingham, Fuller, & Kershaw, 2008). In the light of such evidence, the absence of any correlation between welfare caseload reductions and child vulnerability rates provides reason to question whether the policy emphasis on relatively superficial skill-upgrading programs and/or participation in any immediately available employment may undermine welfare recipients' opportunities to improve their household financial security when off welfare. The fact that economies like that in BC generate low unemployment levels (below 5 percent), but still leave 21 percent of children in the province to reside in households with sub-poverty-level incomes (Campaign 2000, 2005), provides reason to be cautious about assumptions that any job is better than welfare, at least in terms of neighbourhood influences over child development. Our neighbourhood study thus converges with previous work by Williamson et al. (2005) who provide evidence that overall family income-level is as, if not more, important for child development than parental activity or source of household income.

Since the neighbourhood influence yielded by social assistance rates around the year of the cohort's birth year overlaps with the circumstances of lone mothers (see Tables 1 – 4), it is also noteworthy that the qualitative study reveals how welfare policy contributes to gender occupational streaming. Data show that the private contractors hired to run "Job Training" programs adhere to gender assumptions when assigning clients for skills-upgrading by deterring women welfare recipients from exploring career options

outside of clerical service work, or employment in the feminized, low-paying positions in manufacturing and trades occupations. These practices generate a gender earnings gap among those leaving welfare (Pulkingham et al., 2008). This qualitative observation intersects with our finding that additional female employment in ghettoes within the trades or manufacturing occupations also associates with higher rates of vulnerability for local children (Tables 3 and 4). One implication is that neighbourhoods in which women residents move from welfare into paid work in employment ghettoes should not expect such transitions to co-occur with less vulnerability among neighbourhood residents entering kindergarten.

Although welfare caseload reductions do not relate significantly to neighbourhood vulnerability, the share of the population receiving welfare around the birth year of the cohort in the neighbourhood where the children enter the formal school system is the most important predictor of vulnerability when considering the five EDI scales together. This important finding begs the question: does the association invoke compositional or policy interpretations? The former imply that welfare recipients affect neighborhood socialization in ways that are qualitatively different from the influence exerted by working-poor residents. Mead (1997, 27) advances this interpretation when he argues that policy scholars must question the competence of long-term dependents on welfare by rejecting the assumption of "an invariant, optimizing mentality" in order to acknowledge "the self-defeating aspects of the poverty lifestyle." "Not working and bearing children out of wedlock," he adds, "the behaviours that do the most to precipitate the poverty of the working-aged, are themselves contrary to self-interest as most people understand it" (p. 24).

There is some evidence to support Mead's interpretation. For instance, the working-age poor report more obesity, more smoking and less activity than the non-poor, regardless of whether they receive welfare or are employed. However, the poor engage in less regular alcohol consumption than the non-poor, and even 40 percent of those receiving welfare record that (self-)employment is their primary source of income in a year (Fortin, 2008).

Related to Mead's work, the available qualitative data suggest an alternative compositional interpretation, one that directs attention away from the competence of lone mother recipients of welfare toward that of the men with whom recipients have previously associated (Kershaw, Pulkingham, & Fuller, 2008). These data show that lone mothers consistently report that their recourse to welfare reflects one of two scenarios: they have been the subjects of male violence; and/or they are compensating for male neglect of childrearing responsibilities. One implication is that many social assistance recipients struggle with, and have to compensate for, the consequences of dysfunctional male citizenship behaviour. In such cases, these local residents may have less time, confidence or personal security with which to contribute positively to collective socialization of children in the community.

This qualitative information supports our finding that the separation/divorce rate among lone-mothers associates negatively with child vulnerability rates. While male neglect of child rearing is pervasive among the qualitative sample, male irresponsibility is enabled when reproduction occurs outside of common-law or marital status, without which custodial mothers have less legally enforceable access to biological fathers' time or income. Similarly, by directing attention toward the (in)activity of men, the qualitative data lend support for our finding that vulnerability rates on all five EDI scales rise with the rate of poverty among couples in which women are the only earners. This association suggests that men marginalized within cultural contexts that continue to prioritize male breadwinning are not yet finding positive outlets for their surplus time as it relates to neighbourhood child development patterns.

Although a compositional interpretation may be appropriate, the available qualitative data make clear it is not sufficient to understand the association we find between neighbourhood welfare rates and child vulnerability levels. A policy interpretation is also necessary, one that directs analytic attention to features of the welfare system *per se* which may be exacerbating the deleterious impact that neighborhood poverty exerts over collective socialization practices in neighborhoods. The benefit level is an important starting point for consideration. The National Council of Welfare (2008) shows that welfare benefit levels

for single British Columbians meet just 30 percent of the low-income-cutoff, and that the rate for couples with two children is just 49 percent of the cutoff. Among lone mothers with preschool age children, their disposable income in 2004 hovered around $400 (Canadian currency) per month with which to cover food, transportation and other non-shelter necessities, even after including federal family benefits. This value, controlling for currency exchange and purchasing power parities, is less than half of the funds available to comparable lone-mother families in the UK and Australia; and just over a quarter of the funds to which comparable Norwegian mothers are entitled. Only similar families in the US have lower benefit levels than those reported in the Canadian jurisdiction among a group of 16 affluent OECD countries for which comparable policy data are available (Bradshaw, 2007; Kershaw, 2007). The welfare poor thus suffer considerably higher rates of food insecurity than even the working poor, and suffer the lowest frequency of daily fruit and vegetable consumption among the working-age (Fortin, 2008). It is small wonder that the concentration of social assistance in neighbourhoods correlates most strongly with physical vulnerability among local children, since social dynamics that generate severe food shortage for adults will do the same for children.

In addition, the data describing benefit levels lend support for our finding that social assistance rates overlap negatively with greater inequality among lone mothers, and the 10th income percentile in neighbourhoods. Collectively, these measures signal neighbourhood dynamics in which small population enclaves are left behind socially and economically, even by the standards of others who are relatively disadvantaged. Among those most marginalized, qualitative data reveal that lone mother welfare recipients tend to devote many of their waking hours to piece together food and other material resources from a patchwork of uncoordinated systems like food banks, school breakfast programs, charities, and neighborhood centers without affordable access to transportation, while also meeting regularly with state officials who enforce employment plans and monitor the risk of child neglect when mothers parent in impoverished circumstances (Gurstein & Goldberg, 2008). On top of the stigmatization that accompanies such labour and surveillance, the resulting temporal poverty compromises their availability to contribute favorably to collective rearing. It also increases their risk of unstable residence (Table 2) in substandard apartments (Table 4), factors which associate with added child vulnerability.

Beyond benefit levels, the qualitative data further illuminate that the BC welfare system obliges recipients to deplete their stock of social capital before seeking so-called 'crises grants' from Ministry officials when welfare benefits cannot be stretched to cover necessary expenditures. While working-poor citizens also turn to relationships to supplement finances, Gurstein and Vilches (2008, forthcoming) report that the enforcement of this provisioning strategy by welfare regulations risks one of two things: income assistance recipients either sacrifice future social capital by depleting familial good-will when relationships may be fragile for any of a range of reasons; and/or recipients turn to relationships they formerly left to escape abuse. Insofar as Brooks-Gunn et al. (1997a) identify social capital as a pathway by which community practices influence child development, the BC welfare system may be constraining the social ties through which welfare recipients could otherwise contribute positively to neighborhood socialization.

Finally, Jencks and Mayer (1990) focused the literature on the way that adults who reside outside of the neighborhood may influence local children through their employment and leadership in community institutions like child care programs, community centers, and police headquarters. Qualitative data from BC suggest that the practitioners responsible for welfare policy may be similarly implicated, but in deleterious ways. Welfare recipients reveal that they often feel fear and humiliation when meeting with social workers, in part because they must recount their personal circumstances multiple times to different officials. For select recipients, the social assistance system in BC even proves as traumatizing as the violence they endured from ex-partners (Gurstein & Goldberg, 2008). Given this evidence, the psychological stress inflicted by some welfare officials merits further scrutiny as researchers aim to explain why neighborhood

child vulnerability rates rise as social assistance rates increase, even after controlling for poverty and other local socioeconomic factors.

In sum, developmental data describing a near-census of the kindergarten-age population in BC provide new evidence that neighbourhood concentration of welfare around the year of children's birth is a particularly important predictor of neighbourhood vulnerability years later as local children enter school. The association is significant, both statistically and for future policy design. The compositional and policy insights we discuss above are relevant not only in Canada, but also in Australia, the UK, the US and other jurisdictions which have implemented activation approaches that emphasize a shift from welfare to workfare. We therefore urge colleagues to refer to these quantitative and qualitative findings as they work to resolve the ongoing debate about how welfare policy influences child vulnerability.

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Table 1
Predicting Neighborhood Vulnerability Measured by the EDI Physical Health and Well-being Scale (N=478)

		Model 1 SES Variables				Model 2 Plus 1998 Social Assistance Rates			
	r	B	SE B	B	Pratt	B	SE B	β	Pratt
SES									
Unemployment	*.44*	*1.28*	*0.31*	*.21#*	***29.7***	*0.86*	*0.33*	*.14+*	***18.6***
Lone parents	*.47*	*0.96*	*0.41*	*.16**	***23.4***	*0.69*	*0.41*	*.11*	***15.7***
All residents except lone mothers, % divorced or separated	*.41*	*0.89*	*0.35*	*.14**	***18.9***	*-0.14*	*0.44*	*-.02*	***-2.8***
Lone mothers, % divorced or separated	*-.38*	*-0.86*	*0.30*	*-.14+*	***17.3***	*-0.58*	*0.31*	*-.09+*	***11.0***
Poverty, couples where the female is the sole earner	*.24*	*0.81*	*0.25*	*.13+*	***10.3***	*0.77*	*0.25*	*.13+*	***9.2***
Poverty, difference between those with and without young children	-.02	-0.54	0.26	-.09*	0.4	-0.79	0.27	-.13+	0.6
Policy									
Social assistance	*.52*					*1.87*	*0.49*	*.30#*	***47.8***
			R^2 = .309#					***R^2 = .330#*** $\triangle R^2$ = .021#***	

Note. * p < .05, + p < .01, # p < .001

Table 2
Predicting Neighborhood Vulnerability Measured by the EDI Emotional Maturity Scale (N=478)

		Model 1 SES Variables				Model 2 Plus 1998 Social Assistance Rates			
	r	B	SE B	β	Pratt	B	SE B	β	Pratt
SES									
Wealth, families with children under six	*-.40*	*-0.92*	*0.42*	*-.16**	***21.5***	*-0.50*	*0.46*	*-.08*	***11.3***
Poverty, couples where the female is the sole earner	*.29*	*1.23*	*0.29*	*.21#*	***20.4***	*1.15*	*0.29*	*.19#*	***18.7***
Males in management occupations	*-.33*	*-0.20*	*0.08*	*-.17+*	***18.8***	*-0.16*	*0.08*	*-.13**	***14.7***
Residential instability	*.31*	*0.87*	*0.27*	*.15+*	***15.8***	*0.63*	*0.29*	*.11**	***11.2***
Unemployment	*.37*	*0.57*	*0.33*	*.10*	***12.4***	*0.29*	*0.35*	*.05*	***6.2***
Age, percentage young children	*-.15*	*-0.65*	*0.30*	*-.11**	***5.8***	*-0.55*	*0.30*	*-.09*	***4.8***
Poverty, lone females	*.14*	*0.54*	*0.26*	*.09**	***4.3***	*0.80*	*0.28*	*.13+*	***6.3***
Religion	-.07	-0.70	0.29	-.12*	3.0	-0.61	0.29	-.10*	2.6
Couples, mother full-time employment, father no employment	.05	-0.67	0.25	-.11+	-2.0	-0.70	0.25	-.12+	-2.0
Policy									
Social assistance	*.43*					*1.06*	*0.50*	*.18**	***26.2***
			R^2 = .288#					***R^2 = .295#***	
								ΔR^2 = .007*	

Note. * p < .05, + p < .01, # p < .001

Table 3
Predicting Neighborhood Vulnerability Measured by the EDI Language and Cognitive Development Scale (N=478)

		Model 1 SES Variables				Model 2 Plus 1998 Social Assistance Rates			
	r	B	SE B	β	Pratt	B	SE B	β	Pratt
SES									
Lone parents	*.46*	*1.76*	*0.37*	*.26#*	***37.5***	*1.25*	*0.42*	*.18+*	***25.8***
Wealth, families with children under six	*-.47*	*-1.67*	*0.43*	*-.24#*	***36.7***	*-1.22*	*0.47*	*-.18+*	***25.9***
Poverty, couples where the female is the sole earner	*.24*	*0.97*	*0.32*	*.14+*	***10.9***	*0.83*	*0.32*	*.12**	***9.0***
Females in trades occupations	*.29*	*0.56*	*0.24*	*.10**	***9.4***	*0.56*	*0.24*	*.10**	***9.1***
Income inequality, lone female parents	*-.22*	*-0.70*	*0.29*	*-.10**	***7.2***	*-0.47*	*0.31*	*-.07*	***4.7***
Language and immigration	.05	0.67	0.31	.10*	1.6	0.76	0.31	.11*	1.7
Median charitable donation	-.03	0.83	0.28	.12+	-1.0	0.77	0.28	.11+	-0.9
Couples, mother full-time employment, father no employment	.08	-0.60	0.29	-.09*	-2.3	-0.64	0.28	-.09*	-2.4
Policy									
Social assistance	*.48*					*1.23*	*0.50*	*.18**	***27.0***
		R^2 = .312#				***R^2 = .320#*** ΔR^2 = .009*			

Note. * p < .05, + p < .01, # p < .001

Table 4
Predicting Neighborhood Vulnerability Measured by the EDI Communications and General Knowledge Scale (N=478)

		Model 1 SES Variables				Model 2 Plus 1998 Social Assistance Rates			
	r	B	SE B	B	Pratt	B	SE B	β	Pratt
SES									
Language and immigration	*.46*	*2.20*	*0.37*	*.32#*	***29.3***	*2.61*	*0.38*	*.38#*	***33.7***
Females in manufacturing occupations	*.50*	*0.52*	*0.14*	*.17#*	***17.1***	*0.49*	*0.14*	*.17#*	***15.7***
Poverty, couples in which the female is the sole earner	*.40*	*1.35*	*0.30*	*.20#*	***15.4***	*1.02*	*0.30*	*.15#*	***11.3***
Dwelling in apartments	*.40*	*1.31*	*0.26*	*.19#*	***14.9***	*0.72*	*0.30*	*.11**	***8.0***
10th percentile of earnings	*-.40*	*1.14*	*0.37*	*.17+*	***-13.0***	*1.13*	*0.36*	*.17+*	***-12.5***
Education	*.21*	*1.55*	*0.39*	*.23#*	***9.4***	*0.90*	*0.42*	*.13**	***5.3***
Unemployment	*.34*	*0.95*	*0.34*	*.14+*	***9.2***	*0.67*	*0.34*	*.10*	***6.2***
Deep poverty, couples with no earners	*.40*	*0.71*	*0.29*	*.10+*	***8.1***	*0.52*	*0.29*	*.08*	***5.7***
Lone mothers, % divorced or separated	*-.26*	*-0.98*	*0.30*	*-.14+*	***7.3***	*-0.76*	*0.30*	*-.11+*	***5.5***
Poverty, couples in which the female is the sole earner, difference between families with and without children	.08	0.44	0.14	.11+	1.8	0.38	0.13	.10+	1.5
Income inequality, lone female parents	.02	0.91	0.28	.13+	0.6	1.28	0.30	.19#	0.9
Policy									
Social assistance	*.40*					*1.68*	*0.44*	*.25#*	***18.6***
				R^2 = .510#				***R^2 = .525#***	
								ΔR^2 = .015#	

Note. * p < .05, + p < .01, # p < .001